

NEW JERSEY'S LONG TERM WATER MONITORING and ASSESSMENT STRATEGY

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NJ Water Monitoring Coordinating Council

Clean Water Act requires states to:

- ❖ Monitor the quality of all navigable waters
- ❖ Compile and analyze data on water quality
- ❖ Include data in 305(b) report

❖ Comprehensive strategy required under EPA Guidance **“Elements of a State Water Quality Monitoring and Assessment Program”**

❖ All States required to develop or have strategy

❖ 10 year timeframe

❖ Due to EPA Region 2 - Sept. 30, 2004

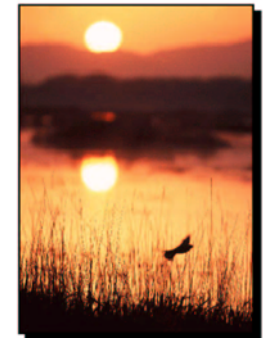
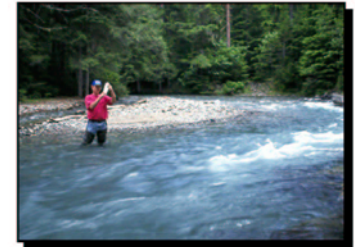
❖ NJDEP - lead in Strategy development

❖ Needed for continued receipt of federal 106 funds



Elements of a State Water Monitoring and Assessment Program

March 2003



Must include monitoring & assessment strategy for all waters of the state:

- ❖ Streams
- ❖ Rivers
- ❖ Lakes
- ❖ Reservoirs
- ❖ Estuaries
- ❖ Coastal Areas
- ❖ Groundwater
- ❖ Wetlands

Questions to Consider in Strategy Development

- ❖ Overall quality of state's waters?
- ❖ Extent of water quality change over time?
- ❖ Problem areas & areas needing protection?
- ❖ Level of protection needed?
- ❖ Effectiveness of projects/programs?

Strategy “Elements” for each water type include:

- ❖ **Monitoring Objectives**
- ❖ **Monitoring Design**
- ❖ **Core & Supplemental Water Quality Indicators**
- ❖ **QA/QC**
- ❖ **Data Management**
- ❖ **Data Analysis/Assessment**
- ❖ **Reporting**
- ❖ **Program Evaluation**
- ❖ **General Support/Infrastructure Planning
(programmatic/resource needs)**

“Element” - Water Quality Indicators

Monitoring parameters required for indicator development & use (by the 4 designated uses) found in “Core & Supplemental Indicators” Table (handout)

Recommended Core & Supplemental Indicators

Recommended Core and Supplemental Indicators				
	Aquatic Life & Wildlife	Recreation	Drinking Water	Fish/Shellfish Consumption
Recommended Core Indicators	<ul style="list-style-type: none"> *Condition of biological communities (EPA recommends use of a least two assemblages) *Dissolved oxygen *Temperature *Conductivity *pH *Habitat assessment *Flow *Nutrients *Landscape conditions <p>Additional indicators for lakes: *Eutrophic condition</p> <p>Additional indicators for wetlands: *Wetland hydrogeomorphic settings & functions</p>	<ul style="list-style-type: none"> *Pathogen indicators (E. coli, enterococci) *Nuisance plant growth *Flow *Nutrients *Chlorophyll *Landscape conditions <p>Additional indicators for lakes: *Secchi depth</p> <p>Additional indicators for wetlands: *Wetland hydrogeomorphic settings & functions</p>	<ul style="list-style-type: none"> *Trace metals *Pathogens *Nitrates *Salinity *Sediments/TDS *Flow *Landscape conditions 	<ul style="list-style-type: none"> *Pathogens *Mercury *Chlordane *DDT *PCBs *Landscape conditions
Supplemental Indicators	<ul style="list-style-type: none"> *Ambient toxicity *Sediment toxicity *Other chemicals of concern in water column or sediment *Health of organisms 	<ul style="list-style-type: none"> *Other chemicals of concern in water column or sediment *Hazardous chemicals *Aesthetics 	<ul style="list-style-type: none"> *VOCs (in reservoirs) *Hydrophyllic pesticides *Nutrients *Other chemicals of concern in water column or sediment *Algae 	<ul style="list-style-type: none"> *Other chemicals of concern in water column or sediment

❖ **Evaluation criteria** for each strategy element

❖ **5 levels** of monitoring & assessment program development

Input from Council Members - Request

- ❖ Review **Council description** section
- ❖ Vision of **comprehensive NJ Water Monitoring Program** in 10 yrs
- ❖ Best ways to **fill monitoring gaps**
- ❖ Review of **draft strategy document or particular sections** during Aug '04